

Listing of Claims:

The following listing of claims replaces all prior versions and listings of claims in the application. Additions are indicated by underlining and deletions are indicated by ~~strikethrough~~.

1. (Currently Amended) An isolated or recombinant polypeptide comprising a sequence which differs in ~~0 to 16~~ 0 to 8 amino acid positions from the sequence of SEQ ID NO:12, which polypeptide exhibits ~~an interferon-alpha activity, wherein the interferon activity is an antiviral activity.~~
2. – 4. (Canceled)
5. (Canceled)
6. (Original) The polypeptide of claim 1, wherein the antiviral activity of the polypeptide is equal to or greater than the antiviral activity of huIFN-alpha 2b or huIFN-alpha 2a.
7. (Original) The polypeptide of claim 6, wherein the antiviral activity of the polypeptide is at least two-fold greater than the antiviral activity of huIFN-alpha 2b or huIFN-alpha 2a.
8. (Currently Amended) The polypeptide of claim 1, wherein the polypeptide further exhibits ~~an~~ interferon-alpha antiproliferative activity and wherein the ratio of antiviral activity/antiproliferative activity is at least two-fold greater than the ratio of antiviral activity/antiproliferative activity exhibited by huIFN-alpha 2b or huIFN-alpha 2a.

9. (Original) The polypeptide of claim 8, wherein the polypeptide exhibits a ratio of antiviral/antiproliferative activity at least four-fold greater than the ratio of antiviral activity/antiproliferative activity exhibited by huIFN-alpha 2b or huIFN-alpha 2a.

10. (Currently Amended) A conjugate comprising

(a) ~~the polypeptide of claim 1 a polypeptide comprising a sequence which differs in 0 to 8 amino acid positions from the sequence of SEQ ID NO:12; and~~

(b) a non-polypeptide moiety covalently attached to the polypeptide, wherein the conjugate exhibits ~~an interferon-alpha activity, wherein the interferon activity is an~~ antiviral activity.

11. (Original) The conjugate of claim 10, comprising at least two non-polypeptide moieties.

12. (Previously Presented) The conjugate of claim 18, comprising a polyethylene glycol moiety covalently attached to a cysteine residue.

13. (Previously Presented) The conjugate of claim 18, comprising a polyethylene glycol moiety covalently attached to a lysine residue or to the N-terminal amino group.

14. (Previously Presented) The conjugate of claim 18, comprising a polyethylene glycol moiety covalently attached to a lysine residue.

15. (Previously Presented) The conjugate of claim 18, comprising a polyethylene glycol moiety attached to the N-terminal amino group.

16. (Previously Presented) The conjugate of claim 18, comprising a polyethylene glycol moiety attached to a lysine residue and a polyethylene glycol moiety attached to the N-terminal amino group.

17. (Original) The conjugate of claim 10, wherein the non-polypeptide moiety is a polymer.

18. (Original) The conjugate of claim 17, wherein the polymer is a polyethylene glycol.

19. (Currently Withdrawn) The conjugate of claim 10, wherein the non-polypeptide moiety is a sugar.

20. (Currently Withdrawn) The conjugate of claim 19, wherein the sugar is attached to an N-glycosylation site.

21. (Currently Amended) A composition comprising the polypeptide of claim 1
a polypeptide comprising a sequence which differs in 0 to 8 amino acid positions from the
sequence of SEQ ID NO:12, which polypeptide exhibits antiviral activity, and
a pharmaceutically acceptable excipient.

22. (Currently Amended) A composition comprising the conjugate of claim 10
a conjugate comprising
(a) a polypeptide comprising a sequence which differs in 0 to 8 amino acid positions
from the sequence of SEQ ID NO:12; and
(b) a non-polypeptide moiety covalently attached to the polypeptide, wherein the
conjugate exhibits antiviral activity, and
a pharmaceutically acceptable excipient.

23. – 31. (Canceled)

32. (Currently Amended) A method for preparing a conjugate, the method comprising
(i) providing ~~the polypeptide of claim 1~~ a polypeptide comprising a sequence which differs in 0 to 8 amino acid positions from the sequence of SEQ ID NO:12, and
(ii) attaching at least one non-polypeptide moiety to an attachment group of the polypeptide, wherein the resulting conjugate exhibits an interferon alpha activity, wherein the interferon activity is an antiviral activity.

33. – 36. (Canceled)

37. (Previously Presented) The method of claim 32, wherein the non-polypeptide moiety is a polymer.

38. (Previously Presented) The method of claim 37, wherein the polymer is a polyethylene glycol.

39. (Previously Presented) The method of claim 38, wherein the attachment group is a cysteine residue.

40. (Previously Presented) The method of claim 38, wherein the attachment group is a lysine residue or the N-terminal amino group.

41. (Previously Presented) The method of claim 38, wherein the attachment group is a lysine residue.

42. (Previously Presented) The method of claim 38, wherein the attachment group is the N-terminal amino group.
43. (Previously Presented) The method of claim 38, wherein at least two polyethylene glycol moieties are attached to the polypeptide and wherein each polyethylene glycol moiety is covalently attached to a different amino acid residue of the polypeptide.
44. (Previously Presented) The method of claim 43, wherein the at least two polyethylene glycol moieties are attached to different lysine residues.
45. (Previously Presented) The method of claim 43, wherein one of the at least two polyethylene glycol moieties is attached to the N-terminal amino group and one of the at least two polyethylene glycol moieties is attached to a lysine residue.
46. (New) An isolated or recombinant polypeptide comprising a sequence which differs in 0 to 8 amino acid positions from the sequence of SEQ ID NO:10, which polypeptide exhibits antiviral activity.
47. (New) The polypeptide of claim 46, wherein the antiviral activity of the polypeptide is equal to or greater than the antiviral activity of huIFN-alpha 2b or huIFN-alpha 2a.
48. (New) The polypeptide of claim 47, wherein the antiviral activity of the polypeptide is at least two-fold greater than the antiviral activity of huIFN-alpha 2b or huIFN-alpha 2a.

49. (New) The polypeptide of claim 46, wherein the polypeptide further exhibits antiproliferative activity and wherein the ratio of antiviral activity/antiproliferative activity is at least two-fold greater than the ratio of antiviral activity/antiproliferative activity exhibited by huIFN-alpha 2b or huIFN-alpha 2a.

50. (New) The polypeptide of claim 49, wherein the polypeptide exhibits a ratio of antiviral/antiproliferative activity at least four-fold greater than the ratio of antiviral activity/antiproliferative activity exhibited by huIFN-alpha 2b or huIFN-alpha 2a.

51. (New) A conjugate comprising
(a) a polypeptide comprising a sequence which differs in 0 to 8 amino acid positions from the sequence of SEQ ID NO:10; and
(b) a non-polypeptide moiety covalently attached to the polypeptide,
wherein the conjugate exhibits antiviral activity.

52. (New) The conjugate of claim 51, comprising at least two non-polypeptide moieties.

53. (New) The conjugate of claim 51, wherein the non-polypeptide moiety is a polymer.

54. (New) The conjugate of claim 53, wherein the polymer is a polyethylene glycol.

55. (New) The conjugate of claim 54, comprising a polyethylene glycol moiety covalently attached to a cysteine residue.

56. (New) The conjugate of claim 54, comprising a polyethylene glycol moiety covalently attached to a lysine residue or to the N-terminal amino group.

57. (New) The conjugate of claim 54, comprising a polyethylene glycol moiety covalently attached to a lysine residue.
58. (New) The conjugate of claim 54, comprising a polyethylene glycol moiety attached to the N-terminal amino group.
59. (New) The conjugate of claim 54, comprising a polyethylene glycol moiety attached to a lysine residue and a polyethylene glycol moiety attached to the N-terminal amino group.
60. (New; Currently Withdrawn) The conjugate of claim 51, wherein the non-polypeptide moiety is a sugar.
61. (New; Currently Withdrawn) The conjugate of claim 60, wherein the sugar is attached to an N-glycosylation site.
62. (New) A composition comprising
a polypeptide comprising a sequence which differs in 0 to 8 amino acid positions from the sequence of SEQ ID NO:10, which polypeptide exhibits antiviral activity, and
a pharmaceutically acceptable excipient.

63. (New) A composition comprising
a conjugate comprising
 - (a) a polypeptide comprising a sequence which differs in 0 to 8 amino acid positions from the sequence of SEQ ID NO:10; and
 - (b) a non-polypeptide moiety covalently attached to the polypeptide, wherein the conjugate exhibits antiviral activity, and a pharmaceutically acceptable excipient.
64. (New) A method for preparing a conjugate, the method comprising
 - (i) providing a polypeptide comprising a sequence which differs in 0 to 8 amino acid positions from the sequence of SEQ ID NO:10, and
 - (ii) attaching at least one non-polypeptide moiety to an attachment group of the polypeptide, wherein the resulting conjugate exhibits antiviral activity.
65. (New) The method of claim 64, wherein the non-polypeptide moiety is a polymer.
66. (New) The method of claim 65, wherein the polymer is a polyethylene glycol.
67. (New) The method of claim 66, wherein the attachment group is a cysteine residue.
68. (New) The method of claim 66, wherein the attachment group is a lysine residue or the N-terminal amino group.
69. (New) The method of claim 66, wherein the attachment group is a lysine residue.
70. (New) The method of claim 66, wherein the attachment group is the N-terminal amino group.

71. (New) The method of claim 66, wherein at least two polyethylene glycol moieties are attached to the polypeptide and wherein each polyethylene glycol moiety is covalently attached to a different amino acid residue of the polypeptide.

72. (New) The method of claim 71, wherein the at least two polyethylene glycol moieties are attached to different lysine residues.

73. (New) The method of claim 71, wherein one of the at least two polyethylene glycol moieties is attached to the N-terminal amino group and one of the at least two polyethylene glycol moieties is attached to a lysine residue.